Small, Flexible Power Management ICs Integrate Two Bucks Regulators and Two LDOs

Analog Devices introduced its ADP5034 regulator/LDO, an integrated power management IC that combines two 3-MHz, high efficiency, 1.2-A step down regulators with two 300-mA LDO (low drop out) regulators in a small LFCSP (lead-frame chip-scale) package. The company also introduced the ADP5024 regulator/LDO, which is identical to the ADP5034 but features a single 300-mA LDO regulator. Occupying a total board area of 69 mm2, the ADP5034 and ADP5024 step-down regulators/LDOs are designed to meet the shrinking board space and increasing performance requirements of processors and FPGAs. The integrated step-down regulators are used 180 degrees out of phase to reduce input filtering, which allows smaller input capacitors to be used while reducing input noise. A dedicated mode pin places both regulators in forced PWM operation or auto PWM/PSM operation for higher efficiency. The low quiescent current, low dropout voltage, and wide input voltage range also enable more efficient power management.

The integrated LDOs feature high 65-dB PSRR (power-supply rejection ratio) performance that ranges from 1 kHz to 10 kHz, lowering output noise to 80 µV/rms for powering sensitive analog circuitry.

The ADP5034 and ADP5024 step down regulators/LDOs are flexible, highly integrated power management components that can be used in applications including USB-powered portable devices, handheld medical products and multi-voltage power applications for processors, ASICs, FPGAs and RF chipsets. Each component has dedicated enable pins for each of the step down regulators and LDOs and supports adjustable output voltages on all four regulator outputs, allowing the output voltages to be easily set using an external resistor divider network. Adjustable output voltage allows the ADP5034 and ADP5024 to be easily and quickly modified to work with different output voltage requirements, which reduces design time and time to market. The ADP5034 and ADP5024 are fully specified over

the junction temperature range of -40 °C to 125 °C and both are available in a 24-lead, 4 mm × 4 mm LFCSP packages.

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800-262-5643, www.analog.com [1]

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